

REMARKS/ARGUMENTS

Applicants submit this response to the Final Office Action dated January 29, 2009. Claims 1-44 remain pending. Claims 11, 14, 18, 19, 23, 33, 35, 38, 39, 42 and 43 are amended. Reconsideration of the application in view of the foregoing amendments and following remarks is respectfully requested.

Claim Rejections – 35 USC § 112

Independent Claims 1, 17, 21, 25, 37, and 41 stand rejected under 35 U.S.C. § 112. In the Office Action, the Examiner stated that the “specification does not describe a summer that sums less than all of the plurality of covered sequences and a selector for selecting the summer from among a plurality of summers.” Applicants respectfully traverse these rejections.

Previously amended Claims 1, 17, 21, 25, 37, and 41 are supported at least by Figures 7A and 7B, and paragraphs [1093] and [1100]-[1105] of the application as originally filed. For example, paragraph [1104] describes L summers “which combine their respective M covered input sequences to form 2L CDM sequences.” Thus, each of the L summers sums less than all of the covered sequences. Paragraph [1104] also describes, for example, that the CDM sequences are multiplexed by a mux, which mux may select sequences one at a time from the summers as described in paragraph [1093], for example. Thus, a summer is selected from among the L summers.

Applicants respectfully submit that Claims 1, 17, 21, 25, 37, and 41 are fully supported by the application as filed and that no new matter has been added.

Claim Rejections – 35 USC § 102, Tiedemann

Independent Claims 14, 19, 35, 39, and 43 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Tiedemann, Jr. et al., USPN 5,914,950 (hereinafter “Tiedemann”).

Claim 14, as amended, refers *inter alia* to “a CDM signal, covered with a first covering sequence, comprising two or more sub-CDM signals, each of the two or more sub-CDM signals comprising a plurality of symbol sequences for reception by respective

ones of a plurality of mobile stations.” **Claims 19, 35, 39, and 43** recite similar limitations.

As described in the prior responses, Tiedemann concerns a method and apparatus for reverse link scheduling. Figure 5, which is relied on by the Examiner, illustrates a modulator 74 of a single remote station for transmitting over the reverse link to a base station cell. *See* col. 24, lines 13-27. In the modulator 74 of the remote station, a number of BPSK and QPSK outputs are fed into Walsh modulators 146 and 148. *See* col. 26, lines 40-50. A signal comprising the outputs of the Walsh modulators 146 and 148 will thus comprise signals for only one remote station. Further, any signal generated by the modulator 74 of the remote station is for transmission to a base station cell, not for “reception by respective ones of a plurality of mobile stations,” as recited in Applicants’ Claim 14.

In view of the above, Applicants respectfully submit that independent Claims 14, 19, 35, 39, and 43 are allowable over the prior art of record. **Claim 15** is a dependent claim that depends from independent Claim 14, and therefore incorporates all of the limitations of Claim 14. For at least these reasons, therefore, Applicants respectfully submit that Claim 15 is also allowable over the prior art of record.

Claim Rejections – 35 USC § 102, Schilling

Independent Claims 11, 16, 18, 20, 23, 33, 36, 38, 40, 42, and 44 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Schilling et al., USPN 6,061,359 (hereinafter “Schilling”).

Claim 11, as amended, refers *inter alia* to “covering the TDM signal with a covering sequence to form a covered TDM/CDM signal configured for transmission in CDM fashion.” **Claims 18, 23, 33, 38, and 42** recite similar limitations.

As described in the prior responses, Schilling concerns an increased-capacity, packet spread-spectrum system. Figure 3, which is relied on by the Examiner, illustrates an in-phase multiplier device 48 and a quadrature-phase multiplier device 148 for shifting multi-channel-spread-spectrum signals to a carrier frequency. The shifted signals are combined to create a QAM-spread-spectrum signal for transmission by an antenna 60. *See* col. 16, line 66 – col. 17, line 10.

In the Office Action, the Examiner alleges that “[m]ultiplier devices 48 and 148 cover the signal to form a covered TDM/CDM signal.” As described above, however, the multiplier devices do not cover the input multi-channel-spread-spectrum signals, but rather merely shift them to a carrier frequency such that they can be combined into a QAM-spread-spectrum signal. The Examiner does not describe, and Schilling does not disclose, how the alleged covering described by the Examiner is “with a covering sequence.” Further, Schilling does not disclose that the multiplier devices 48 and 148 “form a covered TDM/CDM signal configured for transmission in CDM fashion,” as recited in Claim 11.

Claim 16 refers *inter alia* to “receiving the CDM signal.” **Claims 20, 36, 40, and 44** recite similar limitations.

In the Office Action, the Examiner states that “antenna 77 receives a signal as coded by Fig. 3.” As described above, the signal transmitted by the antenna 60 in Figure 3 of Schilling is not covered “with a covering sequence to form a covered TDM/CDM signal.” Therefore, Applicants respectfully submit that Schilling does not disclose “receiving the CDM signal,” as recited in Claim 16.

In view of the above, Applicants respectfully submit that independent Claims 11, 16, 18, 20, 23, 33, 36, 38, 40, 42, and 44 are allowable over the prior art of record. Claims 12-13, 24, and 34 are dependent claims that depend ultimately from independent Claims 11, 23, and 33, respectively, and therefore incorporate all of the limitations of the parent claim from which they depend. For at least these reasons, therefore, Applicants respectfully submit that these claims are also allowable over the prior art of record.

Claim Rejections – 35 USC § 103

Independent Claims 1, 17, 21, 25, 37, and 41 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tiedemann in view of Ho et al., USPN 6,751,264 (hereinafter “Ho”). **Claim 1** refers *inter alia* to “a summer for summing less than all of the plurality of covered sequences to form a first Code Division Multiplexed (CDM) signal” and “a selector for selecting the summer from among a plurality of summers.” Claims **17, 21, 25, 37, and 41** recite similar limitations.

In the Office Action, the Examiner stated that “Tiedemann does not teach a selector for selecting the summer from among a plurality of summers.” The Examiner is relying on Ho to teach the selector recited in Claim 1.

Ho concerns a digital FM receiver having multiple antennas. A first antenna 102 receives a signal having in-phase and quadrature signal pairs I1,Q1, and a second antenna 104 receives a signal having in-phase and quadrature signal pairs I2,Q2. *See* col. 4, lines 37-42. Demultiplexer 1000 receives the signal pair I1,Q1, and the signal pair I2,Q2 after the signal pairs have passed through an IF filter, and separates the in-phase and quadrature components I and Q. *See* Figs. 2, 10, col. 17, lines 35-38. The I and Q components for each signal are divided by N and then squared, and these squares are thereafter summed by summers 1208 and 1222. *See* Fig. 12, col. 19, lines 6-51. A selector unit 1216 selects which of the signals received by the antennas 102 and 104 has greater power based on the summed squares. *See* col. 19, lines 52-63.

Ho therefore describes receiving signals having I and Q signal pairs over a plurality of antennas, and selecting the stronger of the received signals. Applicants respectfully submit that Ho does not describe “a selector for selecting the summer from among a plurality of summers,” and that Ho also does not disclose the claimed feature where the summer “form[s] a first Code Division Multiplexed (CDM) signal,” as recited in Claim 1.

In view of the above, Applicants respectfully submit that independent Claims 1, 17, 21, 25, 37, and 41 are allowable over the prior art of record. Claims 2-10, 22, and 26-32, are dependent claims that depend ultimately from independent Claims 1, 21, and 25, respectively, and therefore incorporate all of the limitations of the parent claim from which they depend. For at least these reasons, therefore, Applicants respectfully submit that these claims are also allowable over the prior art of record.

Allowable Subject Matter

The Office Action stated that Claims 8 and 9 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants are grateful to the Examiner for noting the allowability of these

claims, and respectfully submit that Claims 8 and 9 may also be allowable for reasons other than those discussed in the Office Action.

CONCLUSION

In light of the amendments contained herein, Applicants submit that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

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